

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method for treating a blood vessel for arteriosclerotic disease, said method comprising injecting an estrogen into a location beyond the endothelium of the blood vessel and into a peri-vascular space or the adventitia surrounding the blood vessel wall.
2. (Original) A method as in claim 1, wherein the blood vessel is an artery.
3. (Original) A method as in claim 2, wherein the artery is a coronary artery.
4. (Original) A method as in claim 1, wherein the estrogen is an estradiol.
5. (Original) A method as in claim 4, wherein the estradiol is selected from the group consisting of 17-beta-estradiol and estradiol cypionate.
6. (Original) A method as in claim 1, wherein the blood vessel is at risk of hyperplasia.
7. (Original) A method as in claim 6, wherein the estrogen is injected proximate the region of hyperplasia risk.
8. (Original) A method as in claim 1, wherein the blood vessel has regions of vulnerable plaque.
9. (Original) A method as in claim 8, wherein the estrogen is injected proximate a region of vulnerable plaque.

10. (Original) A method as in claim 1, wherein injecting comprises introducing a catheter into a lumen of the blood vessel and advancing a needle from the catheter, wherein the estrogen is injected through the needle.

11. (Original) A method as in claim 10, wherein the needle is advanced into a perivascular space beyond the outside of the endothelium.

12. (Original) A method as in claim 11, wherein the needle is advanced into the adventitia surrounding the blood vessel.

13. (Original) A method as in claim 1, wherein the estrogen is injected in an amount sufficient to permeate circumferentially around the endothelium and into the adventitia over an axial length of at least 1 cm.

14. (Original) A method as in claim 1, wherein the needle is advanced in a radial direction to a depth in the adventitia equal to at least 10% of the mean luminal diameter at the blood vessel location.

15. (Original) A method as in claim 14, wherein the depth is a distance in the range from 10% to 50% of the mean luminal diameter.

16. (Currently amended) A system for treating a blood vessel, said system comprising:

an amount of an estrogen, and

an intravascular catheter having a needle for injecting the estrogen into a location beyond the endothelium of the blood vessel and into a peri-vascular space or the adventitia surrounding the blood vessel wall.